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AN OPERATION FOR SPINA BIFIDA FORTY YEARS AGO

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"Tempora mutantur et nos in illis mutamur"

The modern surgeon naturally prefers to operate in his own hospital, where conditions are as nearly aseptic as possible; with his own assistants and specially trained nurses, so as to ensure good teamwork; and with all the facilities of the institution at his command. He may, and frequently does, refuse to operate under other conditions.

The following case, somewhat belatedly reported after the lapse of forty years, exemplifies a type of practice universally in vogue only a few decades ago and still necessary in rural districts and outlying communities with no hospital facilities.

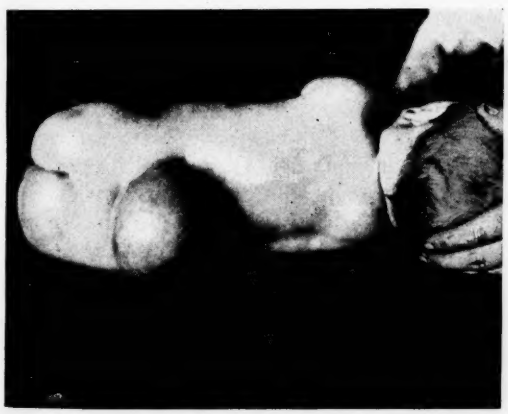

FIGURE 1. *Dr. Munro's case of Spina Bifida. Before operation.*

Josephine N.—a female infant seven weeks old, was brought to me in consultation by Dr. M. P. Mahoney. The infant, born February 7, 1899, at East Webster, Mass., was strong, well-nourished, happy, free from any blemish or imperfection except for a large tumor in the region of the second and third lumbar vertebrae. There were no signs of hydrocephalus, no protrusion of the fontanelles.

The tumor was about three-quarters as large as the child's head; its surface, smooth and unbroken, was covered by healthy skin over the lower portions but was thin, shiny, parchment-like, semi-transparent towards the vertex. It was diagnosed as a Spina Bifida and the child referred to the Rhode Island Hospital for operation. For some reason she was "discharged untreated" April 8th, 1899.

Three days later Dr. Mahoney again came to my office, told me of the child's abortive visit to the hospital and asked if I would operate. He was told to send the infant into the hospital on my service, but said that the mother, in view of the child's unsuccessful visit, was unwilling to take it there again and wanted the operation done at home. It was so arranged.

The operation was performed April 12th, 1899 in the kitchen of a two-story tenement-house in East Providence. The room was neat and clean but there could be no approach to asepsis. The operation was performed upon an ironing-board between two tables. The instruments were boiled and immersed in alcohol; the cotton and sponges were baked in the kitchen-oven. An antiseptic solution was used throughout.

Dr. Mahoney was my only assistant. Ether was administered by Dr. Albert H. Miller, then an interne at Rhode Island Hospital.

A shallow longitudinal incision was made over the circumference of the tumor and the outer tegumentary coat and the dura carefully dissected separately and reflected back, and the delicate, transparent arachnoid, its inner surface covered with nerve filaments, was exposed. A clear fluid was evacuated from the sac, the arachnoid tucked as gently as possible into the defect in the spinal column and covered in by the dura which was held in place by buried sutures. The redundant flaps were now trimmed to size and the external wound

closed by interrupted sutures and dressed with sterilized gauze and cotton.

Recovery was without incident. The picture showing the result was taken eight days after.

FIGURE 2. *Dr. Munro's case of Spina Bifida. Photograph taken eight days after operation.*

The child was bright and highly intelligent. When she was about twelve years old her mother reported that she was the strongest and most robust of her seven children. Except for the measles she was never sick. At seventeen she came to my office with her mother and asked help in securing admission to a training school for nurses. Being told that she was a little too young for that, she entered a business college and became an expert stenographer. At twenty-one she married one of her office associates and later bore him two children. All of these details are cited to show the complete absence of any of the distressing complications which so often attend Spina Bifida.

Josephine died of pneumonia December 6th, 1929 in her thirty-first year, after an illness of thirteen days.

The operation was a simple one; its complete success was due to the fact that no attempt was made to remove the sac of the meningocele. The arachnoid with the net-work of nerve-filaments and rootlets on its inner surface was preserved intact and practically uninjured, thus obviating the dangers of paralysis and loss of function of the lower limbs and various sphincters, as well as materially lessening the perils of the normally high death-rate attending such operations. There were no signs, either before or after the operation, of hydrocephalus or other intracranial complications.

As to the conditions under which the operation was performed: they were the usual thing sixty or more years ago when every operation was practically an emergency operation, and every surgeon, however eminent, was at the same time a general practitioner.

THE PEDIATRIC SIGNIFICANCE OF MALOCCLUSION

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Malocclusion of the teeth is a subject with many ramifications reaching beyond the field of dentistry. The three papers this afternoon indicate the threefold character of the problem and the necessity of co-operation between the dentist, the otolaryngologist and the physician for its solution. The physician holds the strategic position because he is the one who sees the child early in life and is able to exert some influence in the prevention of malformation of the jaws, as well as to discover the necessity for treatment. Fortunately for the child, the practice of periodic examination throughout the period of growth and development is becoming more widely popular. These regular visits to the physician's office provide opportunity for a complete examination of the child, for the supervision of his diet and for guidance in the formation of healthy habits. It is by these means that we may assist in the prevention of malocclusion and contribute to its treatment.

Examination of the teeth is a part of the physical examination of the child. It is not enough to look for caries or evidences of infection,—we must also consider whether there is the right formation of the jaws so that the teeth may erupt in proper alignment. It is important to bear in mind that interest in malocclusion should begin when the child is very young if one expects to exert any influence on prevention or to accomplish the best results in treatment. As will be discussed later, food and mouth habits need careful consideration. Certain correc-

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Read before the Rhode Island Medical Society at the One-hundred and twenty-seventh Annual Meeting, Providence, June 1-2, 1938.

tive exercises may be undertaken as early as the third year. By the time the deciduous teeth have erupted, one can quite accurately predict whether active orthodontic treatment will be necessary. To wait until the permanent teeth are through the gums is to have lost much valuable time. To move teeth which are in bad position is a long, difficult and painful process. Furthermore, when the restraining bands are removed the teeth tend to go back to their former locations. The best results are obtained by so directing the treatment that the teeth may erupt in proper alignment. Such procedures will produce permanent cures.

It is not within the province of this discussion to present the criteria for detecting the various types or degrees of malocclusion,—this belongs in the sphere of the orthodontist. The physician should be aware, however, of some of the signs which indicate the need for special dental care, in addition to the regular supervision for cleaning and filling which every child should receive. The children with glaring forms of malocclusion cannot escape detections; it is the child with the lesser degrees of deformity who may go unnoticed. If the deciduous teeth have erupted and there is no space between them, it is unlikely that the jaws will be large enough for the second set of teeth. When the physician believes that malocclusion of the permanent teeth is a probability the child should be referred to an orthodontist; I say "orthodontist" advisedly, —there are many dentists in general practice who "straighten teeth," but orthodontic care involves more than that. The correction of malocclusion is a specialty requiring expert knowledge and large experience. I wish that the expense of orthodontic treatment could be reduced; many children go through life with malocclusion simply because their parents cannot afford to have anything done about it. It is one of the large items in medical cost which thus far has not been adjusted to the pocketbook of the person of moderate means. I have talked about the economic phase of this subject with my friends among the orthodontists and I am convinced that, taking end results and the comfort of the child into consideration, it is wiser to place the child in the hands of a dentist who specializes in orthodontia. If the child is placed at once in skilled hands much unnecessary treatment may be avoided. By exercises and simple appliances used early, the longer treatment and more elaborate apparatus used by less well-trained men for older children may be avoided.

What can the physician do about malocclusion? Malocclusion results from a variety of factors,—heredity, poor nutrition, obstructed nasal breathing and bad mouth habits. It is prevented or decreased in degree by attention to these matters. Heredity cannot be changed, but if the physician recognizes an inherited jaw formation from which malocclusion will result he may at least be alert to detect the condition early in the child's life and see that corrective measures are started as soon as they will be of benefit.

Nutrition is clearly within the field of the physician. It has been shown by Dr. Percy Howe, Forsyth, Professor of Dental Science at Harvard Dental School, in experimental work with monkeys, that the development of the jaws, as of other bony structures, is directly influenced by diet. The face of the infant grows rapidly and changes markedly in contour. Growth in the anterio-posterio diameter is particularly rapid in the first year of life. This is due to the increase in size of the maxillae to provide space for the teeth. Any deficiency in the diet, particularly in vitamins C and D, results in poor growth of these bones and in jaw deformity. Dr. Cross stated that "90% of the children coming to the Forsyth Dental Infirmary had some form of dental irregularity." Since we have been able to measure the vitamin C content of the blood, numerous studies have revealed the extent to which a deficiency in this vitamin exists. It is possible that there is some connection between these two observations. We are also aware of the widespread presence of rickets and of the changes in bones which are associated with the vitamin D deficiency. The bones of the face share in disturbance of calcium deposition with resultant deformity. Interest in diet, if it is to be wholly effective in producing normal bony development, must extend backward to the diet of the mother during pregnancy and continue throughout the period of childhood.

The child with good heredity and good nutrition may still develop malocclusion if there is obstruction to nasal breathing. With obstruction to the free passage of air through the nasal spaces one finds the whole nose small, no expansion of the alae nasi, the septum deviated, the palate high, the upper jaw narrow and the upper lip short. This is an accurate description of a child whose maxillary bones have not grown normally. The commonest cause of nasal obstruction in children is enlarged adenoids, often associated with enlargement and infection of the

tonsils. We will not enter into the controversial discussion concerning the indications for tonsilectomy but we are willing to state definitely that, when the adenoids are so large as to cause obstruction, the adenoids should be removed even though they may recur later and a second operation be necessary.

Faulty mouth habits may lead to deformity of the mouth and to malocclusion. Thumb-sucking, sucking of a blanket or the tongue, cause a protrusion of the upper jaw, especially of the incisors. The correction of these habits is often a resistant problem but persistence will win in the end. Closely related to mouth habits are eating habits. The jaws grow in response to the need of support for the developing and erupting permanent teeth. The temporary teeth should aid in this process by chewing hard food and exercising the muscles by mastication. The stronger muscles which result from exercise in turn stimulate the growth of the bones of the jaw and thus favor the formation of structures to provide adequate support for the permanent teeth. If the child is given only soft and finely strained food for too long a period, this normal developmental stimulus is lost. When the permanent teeth erupt they are in poor position and chewing is difficult; a vicious cycle has been established, and further malocclusion results.

The other day the mother of a patient came to my office to discuss her child, who had malocclusion. The father was unwilling to have orthodontic treatment; he thought it was "all nonsense"—"just another thing to do to keep up with the Joneses"—and perhaps to improve one's personal appearance —"plenty of people had crooked teeth and got along very well." What can one say to convince a skeptic like this father?

Malocclusion prevents proper mastication of food and is often associated with mouth breathing and poor appetite. Poor nutrition is very likely to be a result. One may suggest a perfect diet for a child but if the child cannot chew properly and has no appetite, he will not benefit by the suggestion, for he will not eat the food. Many undernourished children will show an immediate response to removal of the adenoids and the institution of orthodontic treatment. Removal of the adenoids alone will not be enough to establish good nasal breathing and restore the appetite unless there is good approximation of the upper and lower jaws. Without good nasal breathing there is poor chest development and inadequate lung expansion. Where the nasal spaces are small and poorly developed the accessory nasal sinuses drain poorly and frequently become infected. The child may have headache, malaise and semi-invaladism. It is estimated that 35% of children have extreme oral malformation, interfering with normal growth and development.

There is another quite different aspect which may follow from malocclusion. In speaking, the formation of many sounds is dependent upon the position of the tongue against the teeth. This is especially important in relation to certain consonants. When there is a deformity of the jaws the sounds cannot be produced in the normal manner, and a speech defect occurs. This causes embarrassment to the sensitive or shy child because he is laughed at by other children. This may seriously interfere with his school standing. If the malocclusion is very obvious the child may be conscious of his unattractive appearance and develop a feeling of inferiority directly influencing his whole personality.

From the points of view of both health and happiness, there is ample evidence to indicate the desirability of using every means at our disposal to prevent malocclusion, if possible, and to treat it if it is present. As physicians we have many opportunities to aid in its prevention and, where necessary, to direct our patients to the orthodontist for early treatment.

DO WE CONSIDER THE CHILD AS A WHOLE?

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Dentistry is concerned with an area that must be considered as a part of the body. With our present knowledge, the mouth no longer can be divorced and treated separately or disregarded entirely, because oral and jaw conditions are local expression of general disturbances and are but signs of a disease syndrome. For half a century or more, dental curricula have included the basic sciences of medicine, and have increased in quantity and quality to a great extent. For several years, at the Harvard Dental School, we have had a pediatrician on our staff, and two years ago, two other medical men were added. One is an oto-laryngologist who is connected with the Department of Orthodontics,

the other gives courses in oral medicine and blood chemistry as well as conducts clinical research of a fundamental nature. Aside from the fact that the study of medical subjects has broadened the dental student's concept, it is making it possible for him to understand better the serious problems which you must solve. Though Harvard Medical School authorities have seen fit to give medical students a course in dental medicine, it does not include orthodontic diagnosis. However, it is gratifying to see that a rapidly increasing number of hospitals include a dental interne on their staffs so that it would seem that our future physicians will better understand some of our dental problems and be in a better position to lend a helping hand in solving them. At the Children's Hospital, the medical student, in making a medical examination, calls in the dental interne for an explanation of the dental conditions which may exist, and that, gentlemen, is far better than didactic teaching. They are learning with their eyes.

All of us who are interested in the care of children have one great common bond—the welfare of growing children. The mouth contains the great sense of taste. It is the mould for every spoken word. It is in the mouth that voluntary digestion takes place. A normal mouth means much to a child's future development. In the time allotted, I hope to point out early manifestation of malocclusion, to discuss the pernicious habits which become reflexes, and finally to indicate what can be done to prevent serious mouth deformities.

It may be helpful for all custodians of the health of children of this age to know which child is going to have a normal mouth with normal dental arches and normal development of the internal structures of the face, and which is going to have an abnormal mouth and collapsed dental arches accompanied by pinched and collapsed nasal space. Before a group of physicians it is not necessary to dwell long upon the evil effects of mouth breathing, for the treatmen of pathologically altered respiration is within your field of work. I might point out, however, that chronic mouth breathing, brought about usually by enlarged adenoids and diseased tonsils, is a common cause of mouth deformity. When the nasopharynx is blocked by adenoids or diseased tonsils or both, the child in breathing is forced to use the relief valve—the mouth. The continued open mouth and sagging lower jaw upset the equilibrium of the forces of the facial muscles. The constant but slight inward force thus brought about by muscles of the cheek and lip on the delicate developing bones of the face and the dental arches, caused a deformity to both. I wish to emphasize that the early correction of mouth breathing is preventive orthodontia of the highest order. I beg of you, therefore, to see to it that the upper respiratory tract is cleared of all obstructions early in the child's life. However, in those cases of mouth breathing which have come to you after the child has become a dental cripple, the orthodontist stands ready to cooperate with you for the benefit of the child's future.

I must take time to describe briefly the three basic forms of malocclusion. (1) nutroclusion—the relation of the jaws are normal with a protrusion or retrusion of the anterior teeth, and a contraction of both jaws with crowded and rotated teeth, (2) distoclusion — a mandible is displaced backwards from normal. Here we may have a maxillary protrusion or retrusion. (3) mesioclusion — a forward displacement of the mandible from normal.

I shall not engage your attention long on the question of diet, for you can enlighten me more on that subject than I can ever hope to tell you. However, as you all know, it is a phase which affects development, and is an important factor in our work—your help is sincerely solicited. Lack of a well-balanced diet would most certainly affect the growth of a child.

Is it any wonder that we find many a cripple with constricted arches and teeth erupting every which way on the diet many of them are given? Of course, I realize that this is not the only phase to take into consideration. We have the question of inheritance which must be dealt with, for we know that the size of the teeth and familial characteristics are determined at the time of conception. That question is in itself so important and capable of giving us sufficient headaches that we should not allow improper diet to complicate the picture if we can possibly prevent it.

There is still another phase which I must mention in passing, and that is the question of ductless glands. Suffice it to say that we are cognizant of

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Read before the Rhode Island Medical Society at the One-hundred and twenty-seventh Annual Meeting, Providence, June 1-2, 1938.

their importance and the fact that certain conditions bring on dwarfism, gigantism and acromegaly. However, I am greatly impressed by the possible results which may eventually be obtained from knowing more about them. Perhaps more of our abnormalities are due to endocrine deficiencies in the parent, and suitable treatment at the onset of pregnancy will have its effect on the offspring.

There is still another angle which I am convinced plays a serious part on growth and development, and as far as I know, has not received sufficient attention, and that is, illnesses of childhood. The X-ray reveals arrested development in the long bones of the body. Is it not too much to expect that arrested development is confined to the long bones? The children's clinic under Dr. Losch at the Harvard Dental School, which is conducted from a standpoint of clinical research, proves conclusively that early diseases of childhood are reflected both in the long bones and the jaws.

Conclusion

It is sometimes feared that early orthodontic treatment will upset a child's nervous system. I do not know for certainty if such is the case. In orthodontics, as in all fields of the healing art, any treatment by unskilled hands is dangerous. But, in our field of work, the dangers are much greater the older an individual becomes. Our interest, therefore, centers on the prevention of extreme malocclusion rather than on the cure. These deformities go deeper than mere facial disfigurement, and are so closely allied to the highest nervous centers, that their correction is imperative at an early age. We believe that orthodontic diagnosis should be included in courses given to medical students.

We are greatly handicapped in our work by lack of knowledge in determining the causes of certain deformities. If we knew more about etiology, fewer failures would result. This lack of knowledge is not due to lack of interest. Unlike our mother profession of medicine, dentistry has not received large endowments for research. We have a group of men in the Harvard Dental School who would be willing to give their right eyes for the opportunity to force Nature to reveal some of her secrets which she has held for so long, but lack of funds stops them. Questions which baffle us now must still remain Nature's mysteries.

PROPOSED BASIC SCIENCE ACT FOR THE STATE OF RHODE ISLAND — 1939

SEC. 1. (It is the purpose of this Act to establish a state board of examiners in the basic sciences underlying the practice of the healing art, to provide for its organization and powers, to provide that certification by that board be a pre-requisite to eligibility for examination for license to practice the healing art whether the license is issued after examination or on the basis of a license issued in some other state to the particular applicant, and to define the healing art.)

SEC. 2. No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof or be granted any such license unless and until he has presented to the proper licensing board or official empowered to issue such license, a certificate of ability in (1) anatomy, (2) physiology, (3) pathology, (4) symptomatology, (5) chemistry, (6) bacteriology, (7) and public health, hereinafter referred to as said basic sciences, issued by the state board of examiners in the basic sciences hereinafter referred to as said board.

SEC. 3. For the purposes of this act, the healing art includes any system, treatment, operation, diagnosis, prescription, or practice for the ascertainment, cure, relief, palliation, adjustment, or correction of any human disease, ailment, deformity, injury, or unhealthy or abnormal physical or mental condition.

SEC. 4. The Director of Public Health, within thirty days after this act takes effect, shall appoint said board to consist of three members. The members of said board shall be appointed one for one year, one for two years, and one for three years. On the expiration of the term of any member, the Director of Public Health shall fill the vacancy by appointment for a term of three years. On the death, resignation, or removal of any member, the Director of Public Health shall fill the vacancy by appointment for the unexpired portion of the term. Every member shall serve until his successor is appointed and qualified. The members of said board shall be selected because of their knowledge of the basic sciences aforesaid, and each member shall be a professor, or an assistant or associate professor, one on the faculty of Brown University, one on the faculty of Rhode Island State College, and one on the faculty of Providence College. Each member

shall have resided in Rhode Island not less than one year next preceding his appointment. No member of said board shall be actively engaged in the practice of the healing art or of any branch thereof.

SEC. 5. Said board shall meet as soon as practicable after their appointment and shall organize by appointing one of its members as chairman and another as secretary. Said board shall have power to adopt a seal which shall be affixed to all certificates issued hereunder, to make such rules and regulations as it deems expedient to carry out the provisions hereof and shall keep a record of its proceedings which shall be prima facie evidence of all matters contained therein. Each member of said board shall receive ten dollars per diem and actual expenses, when actively engaged in the discharge of his duties.

SEC. 6. The fee for the original examination shall be ten dollars. The fee for the first re-examination if made within twelve months of the original examination, shall be five dollars, but the fee for any subsequent re-examination shall be the same as the original fee. Said board shall pay into the state treasury all moneys received as fees under this act.

SEC. 7. Said board shall conduct examinations at such times and places as it deems best. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability, and skill in the basic sciences. The examinations shall be conducted in writing, but may be supplemented by oral examinations, and if practicable shall be supplemented by examinations in the laboratory, dissecting room, and dispensary, and at the bedside. If the applicant receives a credit of 75 pr cent or more in each of the basic sciences he shall be considered as having passed the examination. If the applicant receives less than 75 per cent in one subject and receives 75 per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, on application and payment of the prescribed fee, and he shall be required to be re-examined only in the subject in which he received a rating less than 75 per cent. If the applicant receives less than 75 per cent in more than one subject, he shall not be re-examined unless he presents proof, satisfactory to the board, of additional study in the basic sciences sufficient to justify re-examination.

SEC. 8. No certificate shall be issued by said board unless the person applying for it submits evidence satisfactory to said board (1) that he is a citizen of the United States or has taken out his first citizenship papers; (2) that he is not less than twenty-one years old; (3) that he is a person of good moral character; (4) that before he began the study of the healing art he was graduated by a high school accredited by the department of Public Health of Rhode Island, or a school of similar grade, or that he possesses educational qualifications equivalent to those required for graduation by such an accredited school; and (5) that he has a comprehensive knowledge of the basic sciences as shown by his passing the examination given by said board, as by this act required. This shall not be construed to prevent the issue of certificates under the provisions of Section 8 of this act.

SEC. 9. The said board may, at its discretion waive the examination required by Section 7, when proof satisfactory to the board is submittd showing (1) that the applicant has passed in another state an examination in the basic sciences either before a board of examiners in the basic sciences or before a state board authorized to issue licenses to practice the healing art; (2) that the requirements of that state are not less than those required by this act as a condition precedent to the issue of a certificate; and (3) that the board of examiners in the basic sciences in that state grants like exemption from examination in the basic sciences to persons holding certificates from the state board of examiners in the basic sciences of Rhode Island, or holding licenses to practice the healing art according to the method or school that the applicant proposed to follow, issued after examination by the proper licensing board of Rhode Island.

SEC. 10. No provision in this act shall be construed as repealing any statutory provision with reference to the requirements for admission of applicants to examination by any of the various professional examining boards or as dispensing with such examinations.

SEC. 11. No examining board for any branch of healing shall admit to its examinations, or license, or register, any applicant to such board, unless such applicant shall first present to said board a certificate of ability in the basic sciences issued under the provisions of this act.

SEC. 12. The said board may revoke any certificate of ability granted upon mistake of material fact or by reason of fraudulent misrepresentation of fact by any applicant, or when the holder shall be convicted under Section 11 of this act.

SEC. 13. Any licensing board which has issud a license on the basis of a voided or revoked basic science certificate shall revoke or cancel that license. The procedure for such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued, authorizing the cancellation or revocation of licenses generally. The certificate issued to any person by the state board of examiners in the basic sciences shall be revoked automatically by the revocation of his license to practice the healing art or any branch thereof.

SEC. 14. If any person shall unlawfully obtain or procure a certificate of ability under the provisions of this act, whether by false or untrue statements contained in his application to the board, or by other fraud or misrepresentation, or if any person shall forge, counterfeit, or alter any certificate of ability issued under the provisions of this act, or if any person shall practice healing without securing the certificate required under this act, he shall be guilty of a felony, and shall be subject to the penalties prescribed therefor by law.

SEC. 15. This act shall not be construed as applying to dentists, nurses, midwives, optometrists, chiropodists, barbers, cosmeticians, or Christian Scientists, practicing within the limits of their respective callings; nor to other persons licensed to practice the healing art or any branch thereof in this state when this act takes effect, nor to persons specifically permitted to practice without licenses, practicing within the limits of the privileges thus granted them by said Director of Public Health.

SEC. 16. The General Assembly shall annually appropriate such sums as it deems necessary for the payment of the compensation of members of said board and the state budget director and comptroller is hereby authorized and directed to draw his orders upon the General Treasurer for the payment of said sum, or so much thereof as may from time to time be required, upon receipt by him of proper vouchers signed by the Director of Public Health.

SEC. 17. For the purpose of carrying this act into effect during the fiscal year ending June 30, 1939, the sum of fifty dollars is hereby appropriated, out of any money in the treasury not otherwise appropriated, and the state budget director and comptroller is hereby authorized and directed to draw his orders upon the General Treasurer for the payment of said sum, or so much thereof as may be required, upon receipt by him of proper vouchers signed by the Director of Public Health.

SEC. 18. For the purpose of carrying this act into effect during the fiscal year ending June 30, 1940, the sum of three hundred dollars ($300) is hereby appropriated out of any money in the treasury not otherwise appropriated; and the state budget director and comptroller is hereby authorized and directed to draw his orders upon the General Treasurer for the payment of said sum, or so much thereof as may from time to time be required, upon receipt by him of proper vouchers signed by the Director of Public Health.

SEC. 19. This act shall take effect upon its passage and all acts and parts of acts inconsistent herewith are hereby repealed.

WHAT THIS ACT DOES:

1. Protects the welfare and the health of the people of the State by defining the healing art and by requiring ability in the fundamental sciences underlying the art. (Sections 1, 2 and 3.)

2. Does NOT affect those healers now in practice. (Section 15.)

3. Does NOT discriminate against any system or branch of healing. (Section 8.)

4. Does NOT eliminate the present professional examining boards. (Section 10.)

5. Does NOT permit a healer to be a member of the examining board, but restricts the board to college professors schooled in the basic sciences. (Section 4.)

6. Provides that funds received by the board shall be paid to the State Treasurer, and be disbursed only as appropriated by the Legislature. (Sections 6 and 16.)

7. Does NOT include dentists, nurses, optometrists, etc., practicing within the limits of their respective callings. (Section 15.)

When a physician attends a woman in labor in the absence of another who has been engaged to attend, such physician should resign the patient to the one first engaged, upon his arrival; the physician is entitled to compensation for the professional services he may have rendered.

—From the Code of Ethics of the A. M. A.

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THE BASIC SCIENCE ACT

The State Medical Society, through its legislative committee, has introduced during the past month a revised Basic Science Act which it hopes will become a law of this State by enactment of the General Assembly at its present session.

There should be little need to call to the attention of the profession the importance of this legislation. The trend of healing regulation is in the direction of such measures. The states which continue the older and less restricted means of regulation will increasingly become havens for low grade practitioners of all kinds. The duty of protecting the health of the public rests with the medical profession. The proposed basic science law for Rhode Island is a progressive step in maintaining that protection.

The legislative committee has prepared data on the law which has been sent to each member of the General Assembly. Further than that the task falls to each doctor to impress upon all the importance of the pending measure and to seek its early passage.

The proposed act has been revised by the legislative committee, and further amended by voluntary action on the part of the State Dental Society which requested to be included within the provisions of the bill. Such action on the part of the dental profession is to be highly commended, and is indicative of the desire of those having the best interests of the public health at heart to maintain the highest standards possible.

The revised act calls for a board of examiners in the basic sciences, to be composed of three members serving staggered terms of one, two, and three years. One member is to be selected from the faculty of Brown University, one from the faculty of Providence College, and one from the faculty of Rhode Island State College. In each instance the man selected is to be so chosen because of his knowledge of the basic sciences.

Further, each member of the board cannot be actively engaged in the practice of the healing art or any branch thereof. These provisions make for an unbiased, non-partisan board of examiners. Their appointment is to be by the Director of Public Health.

The measure further provides for the regulations for the examination of applicants, for the marking of credits for successful certification, and for the preliminary educational training.

The new board of examiners in no manner supplants any of the existing professional boards, but rather serves as a supplementary board to give the preliminary examination in the fundamental sciences. The act does not apply to nurses, midwives, optometrists, chiropodists, barbers, cosmeticians, Christian Scientists, practicing within the limits of their respective callings, nor to other persons licensed to practice the healing art or any branch thereof in this state when the act takes effect.

THE ADOLPH MEYER BUILDING

This structure is met with, the first on the right as one enters the State Hospital grounds at Howard from Reservoir Avenue. The building houses work of immense importance, representing the most forward-looking program employed in the treatment of mentally ill patients. It means that our State Hospital here in Rhode Island is beginning to escape the shackles binding it to mere asylum care, is being enabled to actively and as effectively treat cases as does the ordinary general hospital in caring for the physically ill.

It is an extraordinarily cheerful building; its color schemes are pleasant, large windows make it bright and sunny, its tastefully arranged flowers, comfortable furniture, are a far cry from the old concept of mental hospitals. It has a capacity of one hundred and twenty beds. Hydrotherapy, physiotherapy, dining rooms, administration offices are all there, conveniently grouped. Meals eaten in the cafeteria in the company of the opposite sex are part of the rehabilitation and readjustment plan.

Important too is the fact that the new medical and surgical units are in close cooperation and foster the same spirit. Man here is not isolated for observation like a bug on a biologist's pin. He is an entire functioning organism. His mental illness is on exactly the same plane as his physical woes. Metrazol and insulin therapy is made possible and, in the hands of competent and careful physicians, has been entirely free from accidents or fatalities.

The Adolph Meyer Building serves as a reception hospital. All new cases are seen here. It offers its facilities to every patient who may have possibilities of improvement through methods of therapy, twenty-eight per cent of the total admissions are detained in this building.

Physicians in private practice are urged to visit, laymen interested in the work are welcomed. The men in charge want their work to be familiar to everyone in the entire State. Send your mentally ill patients here in the same spirit you would send them to a general hospital for a tonsillectomy. It is doing exactly the same sort of work that privately-managed mental hospitals are doing. This is within reach of the moderate income group and need not carry the stigma of charity.

Our colleagues, Drs. Donley and McDonald, conceived and executed this plan and to them should go credit and recognition. Here is a warning of the gravest significance. *Any curtailment whatever* to the operating funds of the State Hospital for Mental Diseases means that the Adolph Meyer Building will be forced to close its doors. All the optimistic enthusiastic program of modern therapy and what it means in the treatment of mental disease will cease and the word hospital in its fullest meaning will have to be abandoned and have substituted in its place the dreary, hope-destroying word Asylum. We don't want this to happen. The Rhode Island Medical Society should be protector and mentor of this so worthwhile project. Let's all get behind it enthusiastically and loyally!

PROVIDENCE MEDICAL ASSOCIATION

Minutes of the March Meeting

The regular monthly meeting of the Providence Medical Association was called to order by the President, Dr. Harry C. Messinger, on Monday, March 6, 1939, at 8:35 P. M. The minutes of the preceding meeting were read and approved.

Dr. Henry S. Joyce, Chairman of the Committee on Group Hospitalization, reported passage by the State Legislature of the Act to create a non-profit corporation for the operation of a group hospital service plan in Rhode Island, and of the subsequent activity of the new corporation.

Dr. Frank B. Littlefield, Chairman of the Membership Committee, reported at length on the study of the membership regulations of the Association, and listed the recommendations of his Committee which included a complete study of the present By-Laws with the view of possible revisions. The report was accepted as read and placed on file.

The President announced that the obituary of Dr. George H. Crooker had been prepared by Dr. Bertram H. Buxton and Dr. John M. Peters, and was on file with the Secretary.

The President announced the following appointments: Committee for the Study of Voluntary Health Insurance and Allied Matters: Dr. Alex M. Burgess, Chairman; Dr. Henry S. Joyce, Dr. William S. Streker, Dr. Harmon P. B. Jordan, Dr. Anthony V. Migliaccio, Dr. Clinton S. Wescott, Dr. J. Joseph Hoey, Dr. William M. Muncy, Dr. Frank B. Cutts, Dr. Herman B. Winkler, and Dr. William B. Buffum.

Committee on Medical Certification, to serve as a sub-committee of the Committee on Tuberculosis and Silicosis: Dr. U. E. Zambarano, Chairman; Dr. Morgan Cutts, and Dr. Banice Feinberg.

Committee to Study the By-Laws and to recommend Revisions: Dr. John G. Walsh, Chairman; Dr. Herman A. Lawson, and Mr. J. E. Farrell.

The business meeting being completed, the program was turned over to Dr. Frank H. Lahey of Boston, who presented the topic, "The Diagnosis and Management of Carcinoma of the Colon and Rectum." Dr. Lahey illustrated his splendid lecture with lantern slides and completed his presentation with a motion picture in color, showing the details in performance of resection of the right colon.

In the discussion which followed, the President first introduced Dr. Neil W. Swinton and Dr. Leo

V. Hand, both staff members of the Lahey Clinic, who spoke briefly. Further discussion was by Dr. Russell S. Bray, Dr. Lucius C. Kingman, Dr. Frederic V. Hussey, and Dr. Samuel Morein.

The meeting was adjourned with a rising vote of thanks to Doctor Lahey at 10:45 P. M. Attendance 310. Collation was served.

Respectfully submitted,

HERMAN A. LAWSON, M.D., *Secretary*

THE MEMORIAL HOSPITAL

PAWTUCKET, R. I.

Dr. James L. Wheaton is recovering from an extended stay in the hospital.

Staff Appointments

Frank C. MacCardell, M. D. to Eye Service, Out Patient Department. Patrick A. Durkin, M.D. to Urological Service, Out Patient Department. Francis L. Burns, M.D. to Ear, Nose and Throat Service, Out Patient Department. Albert J. Gaudet, M.D. to Pediatric Service, Out Patient Department. Laurence A. Senseman, M.D. to Neurological Service, Out Patient Department. James P. Healey, M.D. and Edward Foster, M.D. to Medical Service, Out Patient Department. Jarvis D. Case, M.D. to Obstetrical Service, Out Patient Department. Albert L. Midgley, D.D.S. to the Dental Service of the Consulting Staff.

Staff Transfers

Joseph C. Kent, M.D. transferred from Urological to Obstetrical Service, Out Patient Department. Thomas J. Dolan, M.D. transferred from Medical to Surgical Service, Out Patient Department. John H. O'Brien, M.D. transferred from Medical to Surgical Service, Out Patient Department. Orlando F. Smith, M.D. transferred from Obstetrical to Surgical Service, Out Patient Department.

The Medical Service has inaugurated a monthly conference taking the form of a symposia on various subjects. The first and second medical services have already given a symposia on "Diabetes," "Vitamins," and "Sulphanilimide." The third medical service will give a symposia on "Syphilis" on Friday, March 31, 1939, at 11:00 A. M. The members of the profession in the Blackstone Valley as well as the staff are invited to these conferences.

At the Clinical Pathological Conference held on March 8, 1939, cases from the medical service were presented. The first case was presented by Dr. Greenstein, from the first medical service; diagnosed as cardiac with the complication of a polycystic kidney.

The second case of inoperable ruptured appendix with cerebral accident was presented by Dr. Barr from the third medical service. This case was discussed by Drs. Hussey, Shaw, Davis, Moor, Greenstein, Benjamin, Eddy, Smith, Field, Durkin and Marshall. In closing there was a discussion by Dr. John F. Kenney.

RHODE ISLAND HOSPITAL

SCHEDULE for APRIL 1939

MONDAYS:

Thoracic Clinic, 4:30 P. M.
Surgical Conference, 12 Noon, April 10, 24.

TUESDAYS:

Gastro-Intestinal Clinic, 9:30 A. M.
Path. Conference, 12 Noon, April 11, 25.

WEDNESDAYS:

Tumor Clinic, 10:00 A. M.

THURSDAYS:

Orthopedic Grand Rounds, 9:00 A. M.
Thoracic Clinic, 11:30 A. M.
Gyn. Staff Meeting, 8:30 P. M., April 6.

FRIDAYS:

Fracture Rounds, 11:00 A. M.
Pediatric Grand Rounds, 11:00 A. M., April 7, 21.
Heart Conference, 11:30 A. M.
G. U. Staff Meeting, 7:30 P. M., April 7.
Surgical Staff Meeting, 8:30 P. M., April 7.

SATURDAYS:

Neurological Grand Rounds, 9:00 A. M.
Medical Conference, 10:00 A. M.

Dr. John T. Keohane of Providence, a graduate of Providence College and Georgetown University Medical School, began an internship on February 1st. Dr. Keohane interned for one year at St. Mary's Hospital, Hoboken, N. J. and four months at the Charles V. Chapin Hospital, Providence.

On December 24, 1938, at Providence Lying-In Hospital, to Dr. and Mrs. Lawrence A. Martineau, a daughter.

Charles V. Chapin Hospital

On April first, Dr. Henry N. Russell, Jr., Dr. Elizabeth Lewis, and Dr. Harold J. Eisenberg completed their internships at the Charles V. Chapin Hospital. Dr. Russell, a graduate of Princeton University and Harvard Medical School, will commence a service at the Massachusetts General Hospital.

Dr. Harold J. Eisenberg, who was graduated from Long Island College of Medicine in 1935, is returning to the Long Island College Hospital for a residency in pediatrics.

Dr. Elizabeth Lewis, a graduate of Tufts College Medical School, started her internship on October first, coming from the New England Hospital for Women and Children. She is the wife of Dr. F. Woodward Lewis who is at present an intern at the Rhode Island Hospital.

Dr. Edgar S. Highberger of Greensburg, Pa., a graduate of the Johns Hopkins University Medical School started a four-month internship on March first.

OBITUARY

VANCE LEE FITZGERALD, M.D.

Dr. Vance Lee Fitzgerald, a member of the Providence Medical Association since 1896, died at the Memorial Hospital, Pawtucket, on September 24, 1938, of myocarditis.

Dr. Fitzgerald was born in Castile Hill, Maine, December 12, 1862, the son of James and Rachel Foster Fitzgerald. He obtained his early education in his home town, later removing to Portland, Maine, where he prepared for entrance to Bellevue Hospital Medical College, from which he obtained the degree of Doctor of Medicine in 1896.

He immediately engaged in practice in Providence and continued in active work until a few months before his death. For the first few years he did a general practice but after a period of Post Graduate study in New York and Boston he specialized in gastro enterology and proctology, being one of the earliest in Providence in that branch of medicine.

He was for a time connected with St. Joseph's Hospital and was for several years a member of the Providence School Committee.

In the earlier years Dr. Fitzgerald resided in Providence but for the past twelve years his home has been in Barrington, with his office in Providence at 223 Thayer Street.

Dr. Fitzgerald was a life member of the American College of Surgeons, a member of the American Medical Association, a Fellow of the Rhode Island Medical Society, and a member of the Amos Throop Club.

He married in 1901 Miss Lida Towle of Bangor, Maine, and is survived by his widow and two daughters.

GEORGE L. SHATTUCK, M.D.
HERBERT G. PARTRIDGE, M.D.

WILLIAM A. HILLARD, M.D.

Doctor William A. Hillard passed away on July 1st, 1938, at his home, 147 West Broad Street, Westerly, Rhode Island, in his sixty-seventh year. He was born in Westerly August 20th, 1870, attended the public schools and graduated from its High School in 1889. Entering Columbia University the following autumn and graduating from the Medical Department in 1893. After finishing his medical training he opened his first office in Manchester, N. H., and practiced general medicine there until April 1896. Having married the previous year he then returned to Westerly and opened an office in his old home and there remained until his death.

Doctor Hillard joined the Washington County Medical Society April 1898. He served as its Secretary from October 1913 until October 1928. He was a loyal member and a hard worker for the Society until the end. He was one of the founders and a charter member of The Westerly Physicians Association and served as its Secretary throughout the life of the Society. Doctor Hillard enjoyed an extensive practice and was recognized as a very capable and successful physician. He was connected with the Westerly Hospital since its opening. Soon after coming to Westerly he took an ardent interest in the civic activities of the town and was an active unceasing worker for the community until his death.

He is survived by his wife, Addie M. Hillard, one son Paul, of Albany, New York, and one grandchild. A true lover of his home and family, he took keen delight in surrounding them with the comforts and luxuries of life. His genial and calm disposition won him friends everywhere, social, political and professional. He will be greatly missed and respectfully mourned.

WALTER E. GRENOLDS, M.D.
JOHN W. HELFRICH, M.D.

NATIONAL TUBERCULOSIS ASSOCIATION

The 35th Annual Meeting of the National Tuberculosis Association will be held at Boston, June 26-29, 1939. All of the sessions are open to any physician who wishes to attend. There is no registration fee nor is it necessary for one to be a member in order to attend the meetings. Dr. Reginald Fitz, 78 East Concord Street, Boston, is the Chairman of the Committee on Arrangements.

Tentative Calendar of All Sessions

MONDAY, JUNE 26

9:30 A.M.—American Sanatorium Association
National Conference of Tuberculosis Secretaries
2:00 P.M.—American Sanatorium Association
National Conference of Tuberculosis Secretaries
6:00 P.M.—Dinner and opening general meeting

TUESDAY, JUNE 27

9:30 A.M.—Joint Medical Session — Pathological and Clinical Sections
Joint Lay Session—Social Work and Administration Sections
2:00 P.M.—Pathological Section
Lay Clinics—Administrative Section
8:30 P.M.—National Conference of Tuberculosis Secretaries Play Night, "Pop Concert"

WEDNESDAY, JUNE 28

9:30 A.M.—Clinical Section
Social Work Section
12:30 P.M.—College Hygiene Luncheon
2:00 P.M.—Joint Lay Session—Social Work and Administrative Sections.
Medical Clinics—Pathological and Clinical Sections
8:00 P.M.—X-ray Conference

THURSDAY, JUNE 29

9:30 A.M.—Joint Symposium of all sections on "Mass Tuberculin Testing and X-raying"
12:15 P.M.—General Session and Business Meeting

AMERICAN BOARD OF INTERNAL MEDICINE, INC.

Written examinations for certification by the American Board of Internal Medicine will be held in various sections of the United States on the third Monday in October and the third Monday in February. Formal application must be received by the Secretary before August 20, 1939 for the October 16, 1939 examination, and on or before January 1 for the February 19, 1940 examination. Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin, U. S. A.

PRELIMINARY REPORT OF HEALTH DEPARTMENT ACTIVITIES

PROVIDENCE, RHODE ISLAND, FOR THE YEAR 1938

The accompanying preliminary statistical report of the activities of the Health Department and of the Vital Statistics of the City of Providence gives an opportunity to evaluate conditions as they exist. While the department is justifiably proud of the record, credit belongs not alone to the department but is to be shared by all participants in the public health program, the private practioner, the private and public agencies and the GENERAL PUBLIC. The low death rate, the low infant mortality death rate and the low maternal death rate may be considered as evidence of the high standard of medical and nursing care furnished the citizens of Providence.

It is very interesting to note that fifty years ago more people under the age of seventy died in the City of Providence than in 1938 for the same age group. This is more striking when one considers that the population in 1938 was nearly twice that of 1888. The saving in life was effected primarily in the age group under one year through better infant care; and among the young children the saving in life was due to better care and to control of the acute communicable diseases, while in the young adult group to the advance made in the control of tuberculosis. The campaign against traffic accidents was also an important factor in achieving the low mortality record.

A study of the immunization figures shows that the tendency is for this work to be done more and more by the private physicians, especially the pediatricians. While the number of immunization treatments performed by the Health Department has fallen off, the fact remains that there has been a continued marked decrease in the actual cases of diphtheria, and there is a high percentage of immuned children found in the entering classes of school. However, unless private physicians keep this department informed of the immunization treatments they are doing, we may be lulled into a situation of false security and slacken the reins of the program, which in turn may be responsible for a large number of non-immunes and the rise of a serious epidemic.

The figures show that we have established records for low mortality in practically all the communicable diseases but that there is need for a great deal of work in the control of whooping cough. In

1938 there were five deaths for this disease as compared with ten deaths in 1937, but for both years the deaths for the under-one year age bracket were five. With a little better cooperation in the reporting of this disease, and more intensive education of the parents to the fact that this is a dangerous disease among infants we believe we might achieve a much more enviable record in controlling the mortality, if not the mortality of this disease, perhaps as satisfactory as the record for the large measles epidemic of 1936-37 when not a single child died.

While public health is undoubtedly a purchasable commodity, its cost may be reduced through the cooperative efforts of all. Public Health is Everybody's Business!

Vital Statistics	1938	1937
Deaths all	3230	3465
Deaths under 1	222	256
Deaths over 70	1095	1029
Births	5551	5377
Marriages	1818	2415
Infant Mortality	39.99	47.61
Death Rate	13.50	14.26
Birth Rate	22.84	22.12
Principal Cases		
1. Heart Disease	833	861
2. Cancer	484	465
3. Pneumonia	266	287
4. Nephritis	271	277
5. Cerebral Hemorrhage	214	234
6. Auto Accidents	30	63
Laboratory Examinations		
Chas. V. Chapin Hospital	34,409	34,366

Milk Department	1938	1937
No. Samples Tested	21,260	22,378
No. Licenses Issued	1,838	1,937
Physicians		
No. Visits to Sick Poor	9,766	8,808
Nursing Visits		
Communicable Dis. Visits	10,704	17,221
Child Hygiene Visits	25,712	25,684
Parochial School Visits	5,362	5,849
Diphtheria Immunization	1938	1937
No. Schick Tests	3,979	3,215
No. Alum Toxoid Treatments	2,902	3,107
Smallpox Immunization		
No. Vaccinated	2,937	2,585
Inspectors		
Food Inspector:		
Inspections	5,536	5,838
Licenses Renewed	1,911	2,293
Licenses Not Approved	6	5
New Licenses	170	219
Transfers	127	159
Withdrawals	11	1
Sanitary Division:		
No. of Visits	4,827	4,016
Dogbite Visits	627	205
Yard Survey	15,662	20,248
Licenses Approved:		
Lodging Houses	0	2
Garbage	22	23
Kennel	23	45
Privy Inspections	126	.....
Flood Inspections	15,000	.....
Child Health Stations		
Visits by Children	13,188	12,451

COMMUNICABLE DISEASES

	Cases			Deaths*		
	1938	1937	1936	1938	1937	1936
Diphtheria	2	9	20	0	3	1
Scarlet Fever	388	1148	589	1	7	7
Measles	18	3763	559	0	0	0
Whooping Cough	1030	1333	463	5	10	3
Pulmonary Tuberculosis	.....	118	.....	78	94	102
Typhoid and Paratyphoid Fever	12	9	16	0	1	2
Poliomyelitis	1	9	1	1	1	0
Epidemic Encephalitis	1	3	3	3	1	1
Epidemic C-S Meningitis	6	17	25	4	9	17
Rocky Mt. Spotted Fever	0	2	0	0	0	0
Undulant Fever	0	3	3	0	0	0
Ophthalmia Neonatorum	0	3	1	0	0	0

Includes Non-Residents

MICHAEL J. NESTOR, M.D.,
Superintendent of Health.